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Nine conference papers discuss the psychology of deafness. They include seven papers from the United States: "Deafness: The Interdependent Variable" by M. Vernon and D. A. Rothstein, "The Reliability and Construct Validity of the Self-Concept of Academic Ability Scale-Form D for Hearing Impaired Students" by L. M. JOINER, "Studies of the Intelligence of Deaf Subjects with Non-Language Tests" by C. P. Goetzinger, "Psychological Values of Higher Education for the Deaf" by P. V. Doctor, "The Role of Communication in the Emotional and Social Development of the Deaf" by J. D. Rainer, "The Draw a Man Test--A Clinical Technique for the Deaf" by G. Lavos, and "Psychiatric Group Work with Deaf Children and Adults" by K. Z. Altshuler. Also provided are "Diagnostic Picture of the Young Deaf Child" by N. Snijders-Oomen of Holland and "How Can the Hearing Handicapped Child Be Prepared for the Adult Life in the Hearing World?" by I. Tuxen of Denmark. (JD)

Psychology of Deafness

Selected Papers from the
Fifth Congress of the World Federation of the Deaf
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Preface

Psychology of Deafness is a collection of 9 papers selected from those presented at the Fifth Congress of the World Federation of the Deaf, Warsaw, 1967. These papers were collected and compiled by the Alexander Graham Bell Association, Washington, D. C. Other collections of papers from the Congress have been compiled and are available from the ERIC Document Reproduction Service. Other collections announced in this issue of Research of Education may be found by consulting the Institution Index under World Federation of the Deaf or the Subject Index under aurally handicapped. Titles of these other collections are:

Communication Methods for the Hearing Impaired
Cultural Activities for the Deaf
Diagnosis of Hearing Loss
Education for the Hearing Impaired (Auditorily Impaired)
Rehabilitation of Hearing
Sociological Aspects of Deafness
Training and Qualifications (Teachers and Workers for the Deaf)
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DEAFNESS: THE INTERDEPENDENT VARIABLE

/The paper/

In view of the importance generally attributed to language in psychological development and function, the importance ascribed to communication difficulties in the genesis and maintenance of psychiatric pathology and the central role of communication, particularly verbal communication in psychotherapy, the study of communication, language and verbal behavior, is of utmost significance, both to the academic scientist and to the clinician. The existence of a population totally or relatively lacking in the communicative skill of verbal language would appear to present an unparalleled opportunity for study. It would be considered a spontaneous experiment of nature in which this language lack would be the independent variable, the effects of which other variables should be determinable. The results might be expected to have potential for generalizing to many areas of behavioral science, transcending its practical value to the population involved. This population is, of course, the prelingually deafened.

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Gaining an understanding of this population logically begins with an examination of those objective data which have been obtained by observation. Broadly stated, some aspects of behavior known or reportedly present in the deaf population and which have been frequently interpreted as resulting from deafness include: a/ the relative or absolute lack of verbal language /1/; b/ a prominence of certain defensive mechanisms, particularly denial, and a general lack of insight /2/; c/ relative psychological immaturity /3/; d/ impulsiveness /4/; and e/ a higher incidence of certain psychiatric disorders /e.g., difficulties in identification, including sexual identification and schizophrenia/ /4,5/.

It may be noted that so far we have followed the usual medical model of concentrating upon pathology, but a total assessment of the situation should also attend to traits characterizing healthful adjustment to the stress of deafness. Such adaptive qualities, equally important, include: a/ vocational competence /6/; b/ development of alternative modes of communication for effective interpersonal relations /7/; c/ independence and wholesome involvement as functioning members of society /for example, the National Association of the Deaf has opposed special income tax exemptions for the deaf/.

Replication of these observations by other workers will be of value, as will be the gathering of additional data from new research directions. It should also be noted that general agreement about certain observations does not always exist among various investigations. For instance, cognitive impairment has been reported to be present by some /7,8/ and absent by another /1/. Resolution of such issues may be approached by additional studies with a variety of techniques.

Beyond the immediate recording of objective observations and the direct benefits which may accure in alleviating the handicap of deafness lies the exciting possibility of insight into human functioning having greater generality. That the study of pathology has thrown much light upon normal functioning in many areas of medicine is, of course, well known. To the behavioral scientist coming into first contact with this field, as in the case of one of the authors, tantalizing questions immediately present themselves for study by virtue of the unique language and communication control imposed by deafness.

Why are the deaf not all schizophrenic? Investigators have often described schizophrenic thought disorder in terms of language or communication deprivation. Moreover, the isolation imposed by deafness might be expected to seriously impair effective functioning and object relations to a degree comparable with that found in schizophrenia. Deafness in may ways would seem to reproduce many of the early experiences thought to be primary to the etiology of schizophremia.

What then does the study of the deaf prove or disprove about the etiology of schizophrenia? What can be learned about such classical psychoanalytic constructs as the Unconscious, Preconscious and Conscious, particularly regarding the importance of verbal cathexes to an idea's coming into preconscious /10/? Can the study of deafness help to clarify and further develop the newer concepts of ego psychology /11/? What can be learned about thought processes and mental functioning, in general, especially with respect to concept formation, abstracting, generalizing, and symbol formation? What light is shed on our understanding of non-verbal communication? Do the implications of using the language of signs support or refute Whorfian hypotheses concerning the strong influence of a people's language on their perceptions /12/?

The importance or lack of importance of language is not yet generally agreed upon /1, 7, 9, 10, 11, 12, 13/, and much meaningful research remains to be done.

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Research on the effects of deafness has been rather uniform in using a basic experimental paradigm in which samples of deaf subjects and samples of normally hearing subjects are measured relative to a given variable. Differences are then interpreted as being due to deafness, or, in many instances, as being the result of the deprivation of verbal language skills caused by deafness.

The fundamental assumption of this approach is that deafness in human beings is an independent psychological variable, i.e., it is the factor which accounts for behavioral differences between the deaf and the hearing. Upon this assumption rests a major share of published research about the psychology of deafness.

It is the purpose of this paper to first examine the mechanisms and processes through which the variable of deafness manifests in behavior. Then questions will be raised regarding the basic assumption implicit in much of the research upon which rests the present "psychology of deafness", i.e. that deafness is an independent variable in comparative studies of the deaf and hearing.

Four principle possibilities arise with regard to how deafness manifests. First, the absence of auditory feedback preventing adequate reinforcement of appropriate verbal responses raises a question about the relative importance of a given sensory modality. If auditory feedback is specifically necessary and visual, electronic, or kinesthetic stimulation cannot be substituted, then the deafness variable cannot be fully compensated for qualitatively regardless of whether or not quantity of stimulation is equated. By way of illustration, we are asking--if a deaf child is unable to perceive language

through audition, is it possible that even equal amounts of language input through other modalities will, by virtue of the difference in modality, still result in reduced language learning? Does deafness assert itself simply by quantitatively reducing sensory input or is its manifestation qualitative a function of sensory modality?

Second, the concept that the age range of two to four years is the critical period for learning language /14/, along with Lorenze's /15/ work on imprinting, suggests that the deafness variable may manifest through poorly developed language - not just because it reduces overall exposure to the stimuli of language, but because the exposure the child receives usually occurs too late in his life. His "readiness" to learn has passed. To what extent are the phenomena of "critical states" and "imprintability" the variables in the language retardation of the deaf not simply the fact that the children cannot hear.

Third, it is generally agreed that deafness is associated with certain behavior patterns. However, the relative extent to which these patterns are a direct reaction to the sensory deprivation versus the degree to which they are a response to parental attitudes toward the handicapped child or other secondary factors once again confuses the manifestation of the deafness variable.

Fourth, it is possible that the /7/ sensory deprivation of deafness, i.e., the lack of auditory input, leaves vast areas of the brain normally used to transmit and integrate auditory stimuli free for other functions or else left to atrophy. Perhaps the result is a total reorganization of the central relative to higher processes. Possibly neurological impairment results, which generalizes to speech and language areas /16/. The existence or absence of these processes strikes at the heart of many of the questions psychology is asking about human learning.

The most conclusive evidence indicating deafness to be an interdependent variable in contrast to an independent

one is the fact that the major etiologies of deafness are also primary causes of brain damage, meaning that behavior must be interpreted as an interaction effect of neurological damage and deafness.

Heredity, which causes from 30 to 60 percent of deafness in school-age children /5, 17, 18, 19/, is associated with over 30 genetic syndromes, including various neurological deficits /20/. Among these are retinities pigmentosa which Rainer, Altshuler and Levine /4/ found accounted for approximately 5 percent of psychoses among the deaf.

Prematurely born children, who are over four times more prevalent in the deaf school-age population than in the general population /5/, are known to have high rates of neurological damage /5, 21, 22, 23, 24, 25, 26, 27, 28/ and, more importantly, a consequent aphasia or communication disability /29, 30, 31, 32/. The latter is of critical importance in the consideration of deafness as an independent variable when language and cognition are being studied.

Maternal [illegible] *which is the leading prenatal* cause of deafness /33/, has a major sequela of various neurological defects with marked behavior manifestations /5, 25, 34, 35, 36, 37, 38, 40/. The same is true of complications of Rh factor, the leading prenatal etiology of profound hearing loss /21, 41, 42, 43, 44, 45, 46/, and meningitis, the ranking post-natal cause of deafness /47, 48, 49, 50, 51, 52/.

The point of all this is that a major and significant amount of the behavioral difference between deaf and hearing persons can be understood in terms of the psychoneurological ramifications of their etiology of hearing loss apart from their deafness. Deafness then is an interdependent, not independent, variable in many deaf subjects.

Not only must this fact be recognized before research studies comparing the behavior of the deaf with that

of the hearing can be meaningfully interpreted in terms of actual cause and effects, but it is also essential to know through what mechanisms and processes deafness manifests.

/The authors are currently involved in work with the psychiatrically disturbed deaf, modeled, in part, upon the excellent program of Rainer, Altshuler and Levine. One author has already been involved in this area. The other became involved in this field through his interest in psychological structuring of information, framed in information theory terms and the contribution of this structure by language /53/. The formal project has only just begun at the time of writing this paper, but will have been proceeding for close to a year by the time of presentation. Problems, insights, and results which derive from carrying this out in a different setting, different geographical area, and by different workers under different circumstances will also be discussed insofar as relevant/.

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THE RELIABILITY AND CONSTRUCT VALIDITY OF THE SELF-CONCEPT OF ACADEMIC ABILITY SCALE-FORM D FOR HEARING IMPAIRED STUDENTS /Communication/

This investigation was a pilot study to determine the reliability and construct validity of an eight-item scale /SCA-D/ designed to assess the self-concept of academic ability of hearing impaired students. The SCA-D scale is a parallel form of the Michigan State University General Self-Concept of Ability Scale /GSCA/. The SCA-D scale has a simple vocabulary and can be administered to the hearing impaired by using signs and finger spelling.

Research objectives included determining: /1/ the equivalence of the SCA-D and the GSCA scales; /2/ the stability of measurement of the SCA-D scale; /3/ the reproducibility of the SCA-D scale; /4/ the item to test homogeneity of each item in the scale; and /5/ the construct validity of self-concept of academic ability with hearing impaired students.

Two groups of subjects were used: /1/ a random sample /N = 97/ of twelfth grade students in an urban public school system; and /2/ all of the "adademic" students in the Indiana School for the Deaf, grades 8-11 /N = 80/.

To assess construct validity, five major variables besides self-concept of academic ability were examined: /1/ grade point average; /2/ IQ scores; /3/ perceived parantal evaluations; /4/ perceived teacher evaluations;

and /5/ grade level.

Analysis of questionnaire and school record data involved the use of Z tests, t tests, F tests, skewness measures, kurtosis measures, Pearson Product Moment correlations, Phi coefficients, Loevinger's H_{it}, and Green's /I/, Rep, and Rep_{ind}.

Findings:

1. Coefficients of equivalence of the two forms /SCA-D, GSCA/ ranged from .84 to .51 in three schools. The overall coefficient of equivalence was .75.

2. Responses to both the GSCA and SCA-D instruments form a normal distribution.

3. The coefficient of stability over six days for the SCA-D was .84.

4. Mean SCA-D scores on test and retest of the hearing impaired were equal.

5. The reproducibility of the SCA-D as measured by Green's summary statistic /I/ was .90 for the hearing impaired and .93 for the non-impaired.

6. Each item of the scale was found to be homogeneous with the total test for both the hearing impaired and the non-impaired.

7. Six construct validity hypotheses derived from a social-psychological theory of learning were confirmed.

Major Conclusions:

Reliable and valid measures of self-concept of academic ability can be obtained with hearing impaired subjects under mass testing conditions. Also, instruments as the SCA-D can be designed which will permit comparisons to be made between the impaired and the non-impaired.

Construct validity findings which parallel those obtained with non-impaired students indicate that a general social-psychology of learning can be equally useful in understanding the learning of the deviant as it has been with "normals". No evidence was found in this research which would force professionals to seek a separate "social-psychology of learning" for the hearing impaired.

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STUDIES OF THE INTELIGENCE OF DEAF SUBJECTS WITH NON-LANGUAGE TESTS

/The paper/

Non-Language group tests of intelligence are frequently used in research with deaf subjects. However, to our knowledge all such tests have been standardized on normal hearing populations. In most instances only verbal directions were employed in the standardization. /The Chicago Non-Verbal Examination is an exception having both a verbal and a pantomime standardization/ Data therefore, with reference to validity and reliability refer to subjects with normal hearing. Little or no research has been directed toward test-retest reliability, and the effects of a second exposure to a test on results when the subjects are deaf. One purpose of the studies at our center was to obtain test-retest data on subjects at a scholl for the deaf with three non-language intelligence tests /The Chicago Non-Verbal Examination, The Terman Non-Language Multi-Mental Test, and the Raven's /1938/ Progressive Matrices/.

Since conflicting results at times occur with reference to the intelligence of the deaf, /on some non-language group tests the deaf consistently are retarted as Pintner's early work, Oleron with the 1938 Raven, etc. while on the Chicago, normal intelligence is invariably found/ a second purpose of our studies was to compare the same deaf subjects on tests which give divergent results.

Although, as noted in the foregoing, the deaf consistently perform poorly on certain non-language group tests of intelligence /the Pintner Non-Language Test, the Raven /1938/ Progressive Matrices, etc./, nevertheless, there have been exceptions

in some investigations when normal intelligence was found /Shirley and Goodenough, Newlee, Wright, etc./. Questions therefore, arise concerning reasons not only for the retardation of the deaf on tests such as the 1938 Raven's Test, but also for the divergence in results which occasionally occur. In short, is the Chicago Test less abstract than the Raven Test ? And if the retardation on the Raven's Test is due to level of abstraction /being higher/ is it language dependent, or because of the circumscribed language dependent, or because of the circumscribed language ability of the deaf ? A third purpose of our investigations then, was to indirectly explore answers to the above questions.

Our results were as follows:

1. Test-retest reliability coefficients for the deaf on the three tests were essentially the same as those reported for hearing subjects. Coefficients of correlations between tests ranged from .67 to .82.

2. Intermediate grade deaf subjects were retarded about two years on the Raven and Terman Tests, but obtained normal intelligence on the Chicago. At retest these subjects improved about four IQ points on the Terman and an equivalent amount on the Raven. On the Chicago there was an 8.4 IQ increase. The differences in the increases /about 4 points/ between the Chicago and the other two tests were statistically significant.

3. The Terman and Raven Tests were subsequently administered to advanced grade students /average C.A. of 18 1/2 years/ at the same school. These older subjects obtained normal intelligence on both tests as contrasted to the younger intermediate grade students /C.A. 13 1/2 years/. Since standardized vocabulary and reading tests had been administered to each group at the time of the IQ tests statistical analyses were applied to determine whether or not performances on the aforementioned tests were related to the improvement in IQ for the advanced grade subjects. No such relationship was found. On the assumption that vocabulary and reading achievement as measured by standardized tests reflect the language level of the deaf it is concluded that language ability

contributed little if at all to the higher IQ performance of the advanced grade students. Perhaps lack of experiences explains the retardation in IQ for the younger subjects. The findings appear to support the conclusions of Furth that language per se has little or no influence on the solution of non-verbal abstract problems by deaf subjects.

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PSYCHOLOGICAL VALUES OF HIGHER EDUCATION FOR THE DEAF

/The paper/

At the beginning of the second third of the twentieth century it is necessary for all of us to stop and assess the position of the individual deaf man in the present day society of this age. The individual deaf man at the present time occupies a much different position in society than he did at the beginning of the twentieth century when it was the aim of most educators of the deaf to see that every deaf boy was trained for some trade, as most education of the deaf was geared entirely to such a conception at that time. Today the position of the deaf worker is geared to a society that is fast becoming automated, and especially automated in many of the types of work that deaf people had traditionally found employment. The problem then of today is how the deaf man can keep a place in modern society that will not keep him an inferior position, economically or socially.

The deaf population in the United States, in all probability, is higher or at least on a par with most nations in the world, yet a recent Congressional inquiry into the present status of the education of the deaf in the United States stated that the general educational level of the deaf in the United States was somewhere around the fourth grade level. Another recent publication by a research group stated that for general purposes the education of the deaf

in the United States should be termed a failure judging by the products being sent out by the schools and classes. Although this decision may be somewhat sever and perhaps some of the blame can be said to exist because of the scarcity of teachers and especially of untrained teachers of the deaf, still, we must face reality and if such a condition does exist, how can we upgrade the deaf man in order that he may meet a world that offers still stiffer competition than he has met in the past.

I believe that for the deaf man to meet these present day conditions in the automated-work-a-day-world he must receive a better education and a higher education than he has received in the past, so he may be at a better advantage to find a place for himself in the semi-professions and in the professions. As many of the jobs requiring manual dexterity will be the first to be done away with in the world of automation, he must find a place for himself among the blue collar workers and the white collar workers. To accomplish this purpose he must receive a better academic education than he has previously had in the past. In the schools and classes for the deaf in the United States this means, among many other things, a far better verbal education than he has previously enjoyed. It also means that he must acquire the ability to conceptualize during the early years in his school program. Without a more secure verbal basis and the ability to form concepts he will find it more difficult to acquire the necessary tools for him to enter the semi-professions or the professions.

During the latter part of the first half of the twentieth century some educators were of the opinion that because of the superior motor abilities of most deaf people they should be encouraged to go into skills that would make the most use of these abilities. Some even questioned the inate ability of deaf people to acquire the elements of a higher education. Some authorities were even suggesting that because deafness was a sensory handicap, it affected the mind of the

average deaf man to such an extent that his thought patterns were possibly different from those of a hearing person.

There were some who said that because of the various method of communication used with the deaf that it resulted in such a concrete approach to thinking that it made abstract thinking on the part of the deaf student virtually impossible. Fortunately, today, most scholars disregard this line of thought and are firmly convinced that the deaf person can be educated, even entering fields of higher education, providing the proper methods of teaching are used, irregardless of whether they follow the teaching procedures of the past. No doubt there are deaf pupils who have additional handicaps which are serious and may prohibit the individual from progressing academically, but we are concerned about educating the deaf person, per se.

Virtually all teachers of the deaf will agree the teaching of written language to the deaf, and especially to the deaf child that has no concept of written language, let alone spoken language, is the paramount problem in the teaching of the deaf. It has been found that for the most part a highly structured method of presenting language to the deaf child is desirable. Although grammar is a structured method of presenting language to a hearing child, it has been found that in dealing with a child born deaf or who became deaf before acquiring language that even a more highly developed method of structuring is necessary. A number of such systems have been developed in the United States. If it is necessary to structure written language for the deaf, it would seem to follow that virtually all subject matter must be more highly structured in its presentation in classes for the deaf.

Students from virtually every state in the Union and from almost twenty-five nations have been enrolled at Gallaudet College. Irregardless of the type of school which these students have come or the type of communication used, nearly all have been weak in vocabulary and in paragraph meaning, which naturally leads to a weaker understanding of concepts for the average student.

Entirely too much attention has been given in the past of the type of communication used in schools and classes for the deaf. We all agree that all types of communication are important, speech, speechreading, the language of signs, fingerspelling, and hearing aids, but if the results obtained are as poor as some researches have found, we should stop and take stock of our academic procedures and make a general over all evaluation of our educational programs. No doubt much can be attributed to the lack of training on the part of the teachers or by no training whatsoever, but by and large presentation of subject matter still remains the paramount obstacle in the education of the deaf.

It may be entirely possible that some of the courses traditionally given in teacher training departments in centers for the deaf should be scaled down or altered. It may be even possible that a course should be given under the general heading of possibly the word Cognition. Although various words and phrases have been used such as teaching the abstract, teaching concepts, or stressing the collective, we have no one course in the average teaching training center that bears directly on this particular point and how the teacher should instruct her class so as to stress these points throughout the entire presentation of her lesson material.

If there will be fewer of the traditional jobs in the future for deaf people, and if there will be more deaf people as there will be more hearing people, a higher academic education for the deaf man is virtually an absolute necessity if we are to eliminate the possibility of a dole within the forseeable future.

It is entirely possible that within the future we may not classify our deaf pupils entirely by chronological age, or by decibel loss, but on the manner of how deaf pupils think and acquire information, verbal or non-verbal. It may be found that the great handicap of deafness may be classified as one of Sensory Deprivation which may result in a pattern of thinking different from that of the normal person.

Such a pattern may not necessarily be inferior but simply different, and be of such a calibre that requires an entirely different approach in acquiring information. This approach may very well be one that is more highly structured than for the mind which is not deprived of one of its senses. We must, in the future, attempt to understand far more fully than we have in the past how the mind of the deaf child may regard the world. I firmly believe that we must do everything possible to see that the teaching of concepts is begun in the early years of the deaf child's education. No one will deny that a deaf child must live in a hearing world, but we must first attempt to understand <u>how</u> a deaf child thinks before we can teach him <u>what</u> to think.

V KONGRES ŚWIATOWEJ FEDERACJI GŁUCHYCH – WARSZAWA 1967
V Congress of the World Federation of the Deaf – Warsaw 1967
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Psych-1

THE ROLE OF COMMUNICATION IN THE EMOTIONAL AND SOCIAL DEVELOPMENT OF THE DEAF

/The paper/

Since 1955, the New York State Psychiatric Institute has conducted an extensive program of psychiatric services to the deaf. In order to gain the knowledge and experience needed for effective psychiatric diagnosis and treatment, the first task was to find out who the deaf people of New York State were - how many they were, what education they had and what were their families like. Searching in a state of over 16 million for its deaf citizens was not easy - and we realized even in those days how much the communication barrier set up between the deaf and their contemporaries kept them isolated from and in many cases unknown to the usual sources of social information.

Nevertheless, by miles of travel, by searching and questioning we obtained the names of over 12,000 deaf persons, grouped into families, and we proceeded to talk to a random sample of this group. The results of these interviews are available in our first book, "Family and Mental Health Problems in a Deaf Population". In our chapter on family relationships, a number of important facts and observations are noted. Over 22 percent of the deaf adults interviewed felt they had been overprotected by their parents, over 4 percent that they had been shunned by both parents and 7 percent by one parent. Most striking was the fact that in only 12 percent of hearing families with a deaf child did anyone other than the child learn to use manual communication. As these children grew up, patterns of unhappiness about their deafness, difficulties at work, and feelings of discrimination developed in a sizable proportion of our subjects, while

their marriage rate was slightly reduced and their divorce rate increased over the general population. Those with the poorest communication showed by far the lowest marriage rate.

Turning from these statistical data to our psychiatric observations, our extensive experience with psychiatric clinic and hospital patients has have emphasized the importance of communication in developing a two-way avenue of understanding among the deaf and between the deaf and hearing persons. Most of the emotional problems of the deaf are caused or aggravated by the communication barrier and the deaf have every emotional problem that the hearing do. This barrier is first set up in infancy and childhood where frustration in communication at home can be so keen and so damaging. It often persists throughout adolescence and adult life where many deaf persons remain socially isolated.

The role of this communication barrier in the emotional and social development of the deaf is considered from the earliest years of life.

A good deal of attention has been given in current psychiatric thinking to the development of what we know as the ego: the executive part of the mind, the part of the mind that perceives, that selects, that regulates, and that communicates.

In the development of this aspect of the personality, to use the words of Dr. Anna Freud, the infant progresses normally from the newborn's utter dependence on maternal care to the young adult's emotional and material self-reliance. At first the infant and the mother are as one. Gradually the child makes his needs known, and begins to see the mother as separate from himself, able to grant satisfactions or withhold them. He learns how to relate to his parents by trial and error, reward and admonition; as he grows up he can use what he has learned with his parents in his dealings with other people. But if the pathway of communication is lacking in the earliest years, a number of things can go wrong in this pattern. First of all, the very young child can feel rejected, left out, abandoned. Bowlby, Spitz and others have described well the anxiety and depression which such early maternal deprivation can cause. Secondly, without communication, the growing child has no outlet for his impulsive needs and restlessness, and he may behave destructively,

have temper tantrums, and further alienate the parents. Finally, the important process of learning how to relate to parents, with all its trials and tribulations, is necessary in order to develop a social sense, a feeling for others, and, if this process is shut out by isolation at home, the child may grow up with severe deficiencies in this area.

People are giving a great deal of thought today to the question of the relationship between thinking and language. Professor Furth who first learned about the deaf by working in our Mental Health Project has just written a book called Thinking Without Language in which he shows on the basis of many experiments that thinking processes, logical thought, adaptation, may take place in the young deaf child without the kind of language experience that the hearing child obtains. Nevertheless, his full intellectual potential is not developed if there is communication isolation during the early crucial years, and the emotional effect described before may be even more far-reaching. We are concerned with the fact that the young deaf child does not, under any present methods of early education, develop the ability to communicate with his parents as the hearing child does. We are concerned with the parents who find out that their child is deaf, and the effect of this discovery upon the patterns of communication and understanding and acceptance and love in the home. If there is one thing that we know about early development, it is the retardation in thinking, in feeling that comes about when there is rejection or deprivation of closeness in early years.

There are other undesirable effects of poor emotional communication between children and their parents. The development of conscience, the ability to handle power and strength, as well as the formation of proper self-identification, is a direct consequence of the relationship to the family, to the father, to the mother. This relationship depends to a large extent on communication, on some form of communication, and is defeated when the parents feel defeated.

I do not plan here to delve into the often heated conflict between the proponents of oral and manual instruction, except to say that, like so many either-or propositions, the conflict may be more apparent than real. For our purpose I will leave

to the language specialists the question of how to develop communication, but I will insist that communication must be developed and done so early. Children cannot grow emotionally without a proper relationship to their parents and communication is so much the essence of that relationship; communication and understanding, anticipation and allowance and love. It is the emotional climate that results from non-communication that I am particularly concerned with at the moment, even more than the intellectual deficit that may result. I recall one family with a deaf son who gathered at the dinner table each night and conversed noisily among themselves, all but the deaf son. Literally all he ever heard or uttered was a variation of one phrase - "please pass the potatoes". One of the most poignant descriptions of the feelings of a deaf boy in a family who never really bothered to include him was conveyed to me by way of a dream reported by another 14-year-old deaf patient. This boy told me that he dreamt he was in a large baseball stadium, standing behind home plate, wearing a catcher's mitt. The stadium was dark. He could not see the people in the stands nor the opposing team, but toward him there came at intervals not hard, round baseballs, but swirling masses of white smoke. They came toward his mitt but each time he tried to catch them, they dropped down to the ground and he missed them. I knew the boy who told me this dream was very much interested in baseball, and being thought of as a good baseball player. I also knew that there was very little communication between him and his family at home. I asked him to tell me more about his dream and he described again the dark stadium, the ghostly balls coming toward him, and how each time he missed them. I continued to ask him more about the dream until finally he signed to me, "Doctor, you don't understand, I told you all I can. I'm deaf. We deaf people are stupid. We are not smart as other people are. We can't understand as much. I can't tell you any more about this dream". An I looked at him and told him, "Son, I think you have just told me what your dream is about. The dream describes, in a picture, in a baseball stadium picture, the feeling you have when you're sitting among hearing persons at home and you see words on their lips but they are ghostly, they

are fuzzy. You cannot make them out. You try to catch them but you miss them and all around you is darkness and you are alone. You feel stupid and like a failure. You are not stupid, but your experience makes you feel that way."

How different from this boy's experience is the description by Mrs. Freddy Bloom in her excellent book, Our Deaf Children, of the early days in the upbringing of her deaf daughter, Virginia. She described with humor and intelligence the patience, the sympathy, the understanding, the determination to include this child into the communicating circle of the family.

As stated so well by Mrs. Bloom, in the development of any personality the question of acceptance is of primary importance. She goes on to say, "if a man in the street had more understanding, he would not be so completely shattered if he should become a father of a deaf child. He would also be able to help his neighbor more if the neighbor were the father of a deaf child." "Sometimes", - she says, "the man in the street is a doctor or a teacher, or an administrator." I might add he might also be an interpreter. "In any official capacity," she said, "he would see to it that the parents who have just been told that their child cannot hear, be given immediate and complete attention".

There are many reasons, of course, why parents neglect communication with their deaf children. I refer particularly to hearing parents. I suspect that deaf parents who have deaf children are more aware of this problem and that the particular communication lack we are discussing is not as great. The deaf parents may indeed have less language, but they may have more understanding. Among the causes of the parents' rejection of deaf children are some of their own serious psychological problems, the feelings of guilt and frustration and anger aroused by the discovery that their child is deaf, which often, paradoxically enough, result in more rejection rather than in more acceptance. However, aside from these emotional problems for which parents should have help and advice, there is still the widespread ignorance about deafness, the widespread ignorance about the problems and the potentials of the deaf. These are things which have never been interpreted often enough or well enough to the man on the street so

that if he or one of his friends has a deaf child, he knows very little of what the whole story is about. The father may be a businessman who has never had contact with deaf persons; he may be a professional man who has never had deaf patients or clients; the mother may have never bothered to communicate with her deaf neighbor down the block.

Turning from the important early days at home, the deaf child goes to school where, of course, he is in the hands of skilled persons who are trained to use and to develop his communication abilities. However, the feeling of not belonging, of futile striving, or of giving up the battle to be understood, once formed in early childhood, is not so easily overcome. When the deaf boy or girl comes into adulthood, as a citizen and a member of society, he should for his sake and that of the community participate fully in the complex world of the arts and the sciences, the law and government.

To deal with this problem when it is already late is better than not at all, and public education, interpretation and contacts between the adult deaf and hearing world are indeed valuable. But it is at the start, in the home, that the important steps must be taken. Until means have been found to reduce or eliminate deafness itself, the parents of deaf children must be themselves educated to accept and communicate with their children and to face and discuss their problems with persons who can help. Visits to the parents of deaf children when the children are very young, and discussion groups in the preschool and school years can be of great help, so that the parents do not feel alone in their reactions. From this ground, the emotional and social development of the deaf will certainly proceed in a more normal and healthy direction.

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Psych - 29

THE DRAW A MAN TEST - A CLINICAL TECHNIQUE FOR THE DEAF

/The paper/

The Goodenough Draw a Man Test /Goodenough, 1926/, is a pioneering effort in evaluating a facet of intelligence which may well be named projective. The child is asked to draw his perception of a man and his drawing is rated on the inclusion of major and minor details as well as proportion, not on artistic talent. The drawing involves association, observation, abstraction of the details of essentials, and other intellectual traits.

It was used with deaf children more than a quarter of a century ago in the comparisons of intelligence levels of deaf and hearing children, then so current. These comparisons were summarized by Pintner in 1941 as indicating as 88 mean quotient among deaf children compared with an expected 100 mean quotient /Pintner, 1941, pp.126-129/, and no new comparisons were added in another summary 14 years later /Lavos, 1955 pp.187-188/.

Another view, less quantitative, would look upon the Draw a Man Test as a projection not only of a relationship with the environmental contact and personality adjustment, the test may have significance in educational guidance of deaf children. In the light of these factors, the

following study was undertaken.

Previous Studies

In 1956, Fiedler was the first to report a functional use of the DAM when she determined differences among groups of good, average, and poor learners in an oral school for the deaf /Fiedler, 1956-1957/. Although she employed the performance section of the Wechaler Intelligence Scale for children, found significant by Levos /1962/ in differentiating between high and low achieving groups of 12 year-old-deaf children, as well as the Leiter International Performance Scale whose educational guidance values were found significant by Birch and her associates /1963/, she found that the DAM yielded statistically reliable group differences between mean quotients of every possible pair of learners while the WISC and the LIPS were not so consistently significant although a parallel study among hearing children did not show such discrimination.

Myklebust /1960/ used the DAM in an extensive study of the correlation between it and a variety of language achievement measures. He concluded that ability on the test was not found to be highly correlated with vocabulary /p.280/. The correlation with other aspects of language ranged from a low of-.22 to a high of .62, chiefly in the .20 to .40 range with higher coefficients among the younger than older deaf children /pp.314-316/.

In the course of a study of 10 deaf and 14 severely hard of hearing children in a residential school for the deaf. Glowatsky /1953/ observed that immaturity and ineffectual commuciation skills characterized most of the children whose DAM quotients were lower than their performance quotients as measured on the Grace Arthur Performance Scale II although total group means on the DAM and the GAPS were within one unit of each other.

Problem and Setting

The purpose of the study, a portion of a more comprehensive analysis of the relationships between achievement and intelligence among profoundly deaf children /Lavos, 1965/, is to investigate the role of projective, unstructured nonlanguage intelligence in verbal educational achievement. The specific questions are:

1. What are the relationships between quotients on the Goodenough Draw a Man Test, measured at 12 years of age, and eight areas of educational achievement, measured at 12 and 15 years of age--concurrent and predictive viewpoint?
2. What are the relative predictive positions of the Draw a Man Test compared with other intelligence variables in multicariate relationships with the eight areas of educational achievement?

The areas of verbal educational achievement are: Receptive language--paragraph meaning /Pm/ and word meaning /Wm/; expressive language--recognition of the proper language expression /Cl/, the average number of words in a sentence or sentence fragment in a composition /Ws/, and rating as to the quality of a composition /Qa/; arithmetic, a structured pattern of symbols--arithmetic reasoning /Ar/ and computation /Ac/; and comprehensive educational achievement--the median result on an achievement battery /Med/. The Pm, Wm, Ar, Ac, and Med Scores are grade equivalents of the Stanford Achievement Test. The Cl is a score on the Clarke Language Test especially designed for the deaf /Heider, 1946/ and the Ws and the Qa are scores based on compositions freely written to a specific set of instructions. These achievement scores were obtained at 12 and at 15 years of age. For the second problem the other intelligence tests, in addition to the DAM, are the Lorge-Thorndike Nonverbal Intelligence Test, Level 3 /LT/, the Pintner General Ability Test, Nonlanguage Intermediate

Series /PGA/, the Raven's Progressive Matrices /RPM/, and the Wechsler Intelligence Scale for Children, performance section WISC. In addition to these five major intelligence variables, 25 specific intelligence variables are included consisting of 15 subtests from the WISC the LT, and the PGA as well as 10 more variables, each of these involving responses to relatively narrow bands of nonlanguage intelligence stimuli /e.g., a digit-span, a pictorical opposites test, etc./. These intelligence variables were measured between 12-0 and 12-5 years of age.

The subjects were 67 deaf children who started their education in a residential school for the deaf at the age of five were continuously enrolled in classes for the deaf, and given basic oral training. Their hearing losses ranged from 60 to 100 db at 500 cps with a 78 mean db loss; from 70 to 100 at 1,000 and 2,000 cps with an 89 mean db loss for the former and an 83 mean db loss for the latter exclusive of 14% who had no response at 1,000 cps and 59% who also had no response at 2,000 cps. All lost their hearing before 24 months, 80% being congenital in loss. They resided in communities without day-class facilities. Children with secondary handicaps of a major nature such as vision loss or cerebral palsy, were eliminated. In addition, emotional involvements of a major nature were controlled by the use of two technique designed to eliminate those with extreme aggressive or withdrawing behavior based on the research of Getz and Levine /Lavos 1965 pp. 22-25/. All testing was done by one examiner, well acquainted with the subjects, trained and experienced in working with deaf children.

The Results and Discussion

The mean quotient on the DAM for the 67 12-year old children is 99.7, SD 15.33. The distribution of quotients is normal as ascertained by the g_1 statistic for skewness /-1.25 with a P .05 of $\pm$ 1.96/ and the g_2 statistic for

kurtosis /-0.47 with a P .05 of ± 1.96/. The 16 correlation coefficients between the DAM test and the eight achievement variables at 15 are significantly greater than a zero coeffecient at a P .05 level, even at a P .01 level with the exception of Ws at 12 /Table 1/.

Table 1. Coefficients of correlation between the DAM Test and the achievement variables at 12 years of age and at 15

Age	Pm	Wm	Ar	Ac	Cl	Ws	Qa	Med
12	.50	.40	.53	.52	.38	.26[x]	.38	.52
15	.50	.57	.49	.53	.35	.53	.52	.57

P .05-- .25 r; P .01-- .33 r

[x] Insignificant at P .01

Through the use of a statistical method it is possible to obtain, from two distributions of coefficients, the probability of their being common or disparate when pooled and ranked by size of the coefficients. The array of coefficients obtained at 12 years of age may then be compared with that at 15 years of age. When the two arrays are so compared, the T′ value is 53.5 indicative of a common distribution of coefficients /P .05 is 49/67, two tailed, 8 observations/. There is consequently no age trend between 12 and 15 years of age in the sizes of the coefficients on quotients on the DAM and scores in each of the eight achievement areas.

The same technique of comparing ranks of coefficients between intelligence and achievement can be continued contrasting the DAM coefficients with those of LT, PGA, RPM, and WISC at 12 and again at 15 to determine whether the DAM coefficients share a common distribution with the other four intelligence tests or form a distribution of coefficients disparate from the others. These T′ values are given in Table 2.

Table 2. T′ values for comparisons of the distributions of the coefficients between achievement at 12 and 15 years of age and the DAM with those of the LT, PGA, RPM, and WISC tests

Age at Achievement	LT	PGA	RPM	WISC
12	50.5	55.0	73.5	53.0
15	43.0[x]	55.0	65.0	42.5[x]

P.05 for a 49/87 T′ two tailed, 8/8 observations
P.01 for a 43/93 T′, two tailed, 8/8 observations

T′ values lower than the P values indicate that the DAM coefficients are significantly lower ranking in size than those compared

[x] Significant at P .01

The data of Table 2, when compared with those of Table 1, suggest that while there is no age trend in concomitant variation in intelligence and achievement when the DAM is used, two other intelligence tests--the LT and the WISC--obtain a significantly larger sized array of coefficients with achievement at 15, though not at 12, than does the DAM. These findings may be expressed by saying that, for concurrent use at 12 in estimating achievement from intelligence, there is no significant difference between the DAM and any one of the other four general intelligence tests while in predicting achievement at 15 from intelligence at 12, greater accuracy may be expected from the LT and the WISC than from the DAM.

The second question is more comprehensive in scope, the effect of the DAM and 29 other intelligence variables, measured at 12, in their combinative relationships to each achievement variable measured at 15. Through the use of a computerized regression equation, it is possible to relate in combination each set of intelligence test scores with a set of achievement scores. The combination is so established that the intelligence variable most predictive is placed as the only term in the equation for the first step; the best pair for the second step; the best triad, third;

and so forth. The succession may be terminated when a given probability of significance is reached, in this a probability of .05 being selected as the termination point for the successive combinations. Each array of intelligence variables then represents an order of increasing strength of combinative interrelationship between intelligence and achievement, and each array at any step in the successive accretion to the basic regression equation, may be succinctly summarized by the multiple coefficient of correlation the R.

The data in Table 3 highlight the role of the DAM in this combinative prediction of achievement at 15 from intelligence at 12. The table is to be read as follows: In relating intelligence to Pm, the DAM Test was outweighed by the strength of 19 other intelligence variables while in relating intelligence to Wm, the DAM placed third in the most significant triad. The DAM occupied steps within the significant band in Ws and Qa as well.

Projective intelligence is associated more closely with expressive language and the word-meaning aspects of receptive language than it is with the closely structured arithmetic achievement variables and the

Table 3. Step of entry of the DAM Test into the multiple regression equation for predicting achievement at 15 when compared with 29 other intelligences variables

	Pm	Wm	Ar	Ac	Cl	Ws	Qa	Med
Step of entry	20	3^{x}	8	22	22	5^{x}	2^{x}	26

^{x} Within the P .05 band of significance

two comprehensive achievement variables, paragraph meaning and median attainment. In short, projective intelligence occupying a more dominant role in other areas of achievement.

The LT was most dominant, recurring in the first step of entry in predicting seven of the eight achievement

variables,and the WISC recurred within the P .05 signifie cance band in three instances in such specific attainments as arithmetic computation in the first step and in the average number of words per sentence and median attainment in the fourth step. The role of the LT Test is suggestive of the Spearman general factor while the potency of the DAM and the WISC tests in certain achievement areas may be viewed as specific factors.

Table 4 presents the increment in accuracy of accounting for variance in the three achievement variables in which the DAM Test placed within the band of significant steps of entry when its results were added to the already existant equation. The table may be read as follows: When considering WM, the inclusion of DAM in the predictive equation from intelligence at 12 to achievement at 15 yields a 6% increase in accounting for variance in achievement. The multiple correlation coefficient is .70 for the most significant pair increasing to .74 when DAM enters the equation to form a triad of significant predictive intelligence variables.

Table 4. Significant multiple correlation coefficients with achievement and percentage increment in accounting for achievement variance associated with the inclusion of DAM in the multiple relationship

	Wm	Ws	Qa
R attained in previous step	.70[a]	.69[b]	.57[c]
R attained upon DAM inclusion	.74	.71	.62
Percentage increament upon inclusion of DAM	6%	2%	6%

[a] R is based on the two most significant intelligence variables

[b] R is based on the four most significant intelligence variables

[c] R is based on one significant intelligence variable.

Some insight into the total picture of predicting achievement from intelligence may be obtained by comparing the .70 R in Wm based on two intelligence variables with the .62 R in Qa, also based on two intelligence variables. If the tests are reliable, then Wm in basically more closely associated with the traits in intelligence test content thatn is Qa and much more than is Ws which needed four intelligence variables to attain a .69 R. This facet in achievement prediction may also be illustrated by comparing the R of .69 in, based on four intelligence variables with a R of .70 attained in Wm with only two intelligence variables in the regression equation.

In the light of these findings treating the intelligence-achievement relationship among deaf children as a single entity should yield to a study of patterns of relative strength in intelligence variables in their relationships to different aspects of school verbal achievement.

Conclusions

This study, based on stringent controls on intervening variables in a group of preverbally deaf children, frames the relationships between nonlanguage intelligence and verbal achievement in a pattern suggestive of further study. The differential sensitivity of the Draw a Man Test suggests probing the intelligence-achievement relationship in terms of an age factor and of the differing contents of the measurements represented in intelligence and achievement testing. Possibly a most potent approach to untangling the web of the relationships would be a factor analysis of the intelligence variables found significantly related to different achievement variables at different age levels, a threefold approach. The application of a concept of general and specific factors, suggestive of the Spearman two-factor theory, may provide the bases for a scholastic aptitude test for deaf children partinent to their intelligence organization and repsonsiveness to different areas of schooling.

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Psych. - 37

PSYCHIATRIC GROUP WORK WITH DEAF CHILDREN AND ADULTS x/

/The paper/

From an inauspicious birth early in the century, forma' group psychotherapy has developed into a discipline of demonstrated value, and one mature enough to have its own internal conflicts and theoretical controversies. The generally accepted bases remain, however, that groups may influence their members more cogently than can a single individual, and that guidet experience within a group can sharpen perceptions of reality, of others and of oneself. Until recently, exhortations to do something for the deaf have been more widespread than practical attempts, and the literature reveals only one preliminary report on the potential of group therapy with deaf psychiatric patients /1/.

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A moment's consideration of deafness makes this omission more striking, for the communication handicap that is its most profound and pervasive accompaniment poses an obvious barrier to clarity in early influence from without. Through perceptions of others, one's roles, responsibilities and aspirations are developed, and an empathic interest in others may be encouraged or fail to be sustained. When understanding is limited, parental influence can be apprehended only in a fragmentary fashion, with rules accepted perhaps, while reasons and feelings are incompletely assimilated. In school, the primary problems are to get information across to the student and increase his skills. Educators, working toward these goals against the formidable obstacles of time and little language comprehension, can hardly be devoted equally to the development of independent thinking around clear perceptions of the emotions and behavior of others. As a result, guided group discussions outside the classroom intent are rare, and older students used to being closely tutored may even resist encouragement toward more active and independent manipulation of concepts /2/. While precise valences cannot be assigned, there is no doubt that the absence of these several experiences contributes to the impulsiveness, lack of concern for others, and superficial appreciation of social requisites which are often attributed to the deaf under the loose designation of immaturity.

Since these characteristics are accentuated in deaf persons with mental illness, group therapy has been a part of the remedial program in New York's special psychiatric inpatient unit for the deaf since 1963 /3/. More recent extensions of the psychiatric research have included a preventive program of consultation and group therapy in a school for the deaf, and utilization of a halfway-house to assist hospital patients in reentry to the community. Staff members working with these individuals are all conversant with manual language. Each setting holds unique

opportunities for the deaf student or patient, and each presents a number of problems for the therapist.

With patients one is confronted with a group heterogeneous as to age, intellectual and educational level, skill in communication, and the extent of personality damage resulting from illness. Experience of three years has dictated certain principles for successful group work under these conditions:

1/ The group should be mixed by sex rather than restricted to either males or females. In all but the most deteriorated cases, the presence of members of the opposite sex has a noticeable and salutory effect. The minor temptation towards vain self-display or antisocial behavior is more than counterbalanced by the subtle pressure towards conformity and emulation of those social qualities conventionally rewarded in our society. Thus the introduction of men to what had begun as an all-female group immediately resulted in better grooming by both and a noticeable lessening of sulky non-participation. The residual biologic interest in each other, when awakened and guided, formed the cornerstone around which interest in extending other realistic perceptions could be built. Even the tendency to show off could be turned to benefit, for it led on occasion to the exposure of strange ideas, which under the pressure of group opinion could be made to yield.

2. Encouragement of group cohesiveness and interest is the second major principle, and is observed by a consistent emphasis on the exchange and clarification of current perceptions. Opinions are drawn from members about themselves and the ideas expressed by others. Discrepancies are teased apart in an effort to understand individual views and seek a consensus. Current living experiences, more often than the dim past, provide the most fruitful material to be milled correctively through the group experience.

Initially patients tended towards disinterest and a credulous acceptance or rationalization of another's bizarre ideas. One patient in the early sessions told of a cruel plot: her cat had been stolen, and for some malicious purpose was later inserted in a picture of her parents shown on a national television program. The story sparked little interest; when asked about it, other patients responded quite laconically, "They shouldn't have done that to her," or "It might have been her cat. It didn't come home." First efforts to stimulate inquiry into the ideas that a picture of the patient's parents was shown on television, and to the implied evil intent were fruitless. After six months of diligent work with the group in this type of direction, a new patient spoke anxiously of a black ghost she had seen, whose malignant influence had led her to angry behavior in her own defense and ultimately to the hospital. The group cross-examined her candidly, and gradually confronted her with a friendly though firm disbelief. Her surprise gave way to angry rebuttal, but after several sessions she seemed to alter her opinion in accord with theirs, and she spoke of her "ghost" more with humor than with panic. About a month later, she spontaneously noted that the ghost had been absent for some time.

Similar direction of interest towards the feelings of others led to helpful suggestions and helping behavior. The group judged one girl to have stopped short in her improvement because she kept to herself too much. An older member of the group was deputized to spend some time with her, to talk and help to bring her out again. Some of these friendships lasted after discharge from the hospital, and patients would return to visit each other, or spontaneously continue the group spirit by asking for concurrent appointments in the clinic where they could meet and exchange notes on the life outside.

3. A final principle, implicit in the foregoing, is that such groups require discreet but firm leadership.

To allow difference of opinion, hold to reality, and interpret immediate and powerful feelings while maintaining a semblance of order, requires a perceptiveness that is both delicate and quick. The inroads of psychotic depredation must not be forgotten, nor can the changed judgment shown by patients be hastened or too quickly relied upon. An early mistake in this direction was our trusting attempt to establish a sense of responsible self-government on the ward. After a few weeks, a young psychopath bullied his way to the presidency. Too disorganized to unite, the other patients soon found themselves as subjects, while their cigar-smoking "king" strutted the halls and exacted obedience. The staff moved to dissolve the government, and care was taken to confine subsequent decisions of the group to areas of mutual evaluation and aid.

Group therapy was not the only tool of the ward. The program also included individual therapy, pharmacologic treatment, and intensive teaching and other rehabilitative measures. That it served an important function, however, is clear from the overall results: more than half of the patients admitted to date have been discharged to the community, with an unusually low rate of return and readmission.[1]

Group work with the school-age deaf, commenced more recently, is less easy to codify. It was begun out of a curiosity about the tendencies toward impulsiveness, psychological dependence, and unconcern over the feelings of others that seemed to be widerspread in our population of adult deaf patients. Observations of younger children, about five years of age, suggested that even at that age there was less togetherness and cooperation in their play than would be expected in a comparable hearing group:

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[1] For a detailed presentation of the overall program and results see reference /31/.

circles of activity seemed more self-focused, and overlap between the circles appeared less frequent; accidental contacts or struggles over a toy were the usual bases for such overlap, rather than the pleasurable enhancement of joint play. An attempt at group work with six boys aged 10 to 12 offered tentative confirmation of these impressions. Seemingly unable to form a cohesive group, they clamored individually for the doctor's attention over several sessions, despite his efforts to turn them towards interest in and communication with each other. The possibility of change over more than this short term was left unexplored because of limitations of time, and further work concentrated on older students: boys 13 to 16 years of age and girls 13 to 15.

Under the doctor's management, the boys' group gradually developed some cohesiveness, although initially they were quite uninterested in each other's opinions or problems. A first spark of mutual awareness was ignited when a local newspaper carried a picture story of a young boy accidentally shot by his brother. Generally unconcerned with the news and having little reading ability, each of the children had, surprisingly, taken pains at home to find out the details of the story. Each tried to tell the doctor about it. When he pointed out that everyone had seen it, a lively interchange developed with details embellished and phantasied misconstructions tumbling out. The common preoccupation with vilence led to discussions of school life, dormitory peck order, and relationships with house parents and other figures of discipline and authority. As these topics expanded, it was as if each boy opened his eyes and took a first good look at the others, noting through the haze of past uninterest that there were similar feelings, and qualities of character other than those embodied in demeanor alone or simple physical appearance.

A pervasive misconception of the role of primitive violence in human relationships was notable, at an age when hearing children begin to be concerned with ideas as well as action and show a budding idealism with regard to social and personal relations. It seemed to be a new idea when the doctor suggested that one of the smaller boys might be protected from repeated badgering if a huskier lad — who had been through a similar experience himself — would take an interest in befriending him. From their initial reaction of surprise there developed a fast friendship, and the little lad — a recent transfer to the school — settled in quite comfortably once his rocky road was smoothed.

The girls' group was more communicative from the outset, more aware of others, and seemed somewhat more capable in certain areas of abstract thinking. For example, the boundaries between borrowing, giving, and stealing — notably blurred in the boys' group — were clearer to the girls. Both groups shared a concern with sexual exploration and its consequences, and an abysmal hodgepodge of superstition, half-truth, and misconception about this area of development. While the need for clarification and reassurance was evident in both, the group of girls seemed to evince a more farsighted interest in defining the future roles of wife and mother.

The current phase of work will amplify these experiences by the addition of two more groups, both coeducational. One comprises older, normal students /16 years or over/, and the other, selected students aged 13 to 16 who show particular problems of adjustment. Our impression thus far is that such group work may provide a usable format for expanding clarity of perception and developing a realistically oriented sense of the roles and rules in dating, social and family behavior. Groups of parents of both younger and older children have also been established and meet regularly once each week. Exploration of their

feelings and problems should support a healthier development of their children as the parentchild relationship is cleared of distorted pressures introduced by the parents' own conflicting feelings. From these bases it is hoped that a sense of mutual concern and a value for the feelings of others — keystones in the development of adult and communal responsibility — will be enabled to grow more firmly in the maturing deaf child.

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Psych-38

DIAGNOSTIC PICTURE OF THE YOUNG DEAF CHILD

/The paper/

It is often around the age of three that children in the Netherlands and in many other countries are presented for entrance into a school for the deaf. This is a most important issue for the handicapped child of this age. It may be decisive for its further development and the entire course of its life. For this reason it is necessary to be very careful with the decision itself as well as with the preparation of the admission.

For a discussion of this transition problem two aspects should be distinguished, which we will label "learning ability" and "emotional adaptability". /It is obvious that these two aspects cannot be separated in reality. The ability to learn presupposes a certain degree of emotional responsiveness and vice versa/.

I. LEARNING ABILITY.

The hearing child in Kindergarten or preschool learns more or less accidentally, i.e. by playing. For the young deaf child systematic and guided learning - however playful it may be starts right from the beginning. The acquisition of speech and language by the deaf child is impossible without systematic and repeated practice under imposed

conditions. In other words: school and discipline start earlier for the young deaf child than for his hearing sibling.

As a consequence a good assessment of the deaf child's learning ability is desirable before school entrance. This may not seem too difficult a task, because we do have standardized tests for this purpose. These are moreover adapted to nonverbal use. However, the assessment of the intelligence of these young children is still hampered by several serious problems: -

1. The age of 5 appears to be rather a difficult one for testing. The négativism and lack of cooperation, normal for children of this age in general, is in many cases also characteristic for these children who have disturbed communication. This is even more so far children who come for examination without understanding what is going on. Many of them have very limited experience with strangers and strange environments, except for medical experiences; but these are little reassuring and the parents who bring them are generally in a state of nervous tension themselves.

Moreover in many cases there is a general retardation or a multiple handicap. It is no wonder that many of these children are unfit for psychological examination in a strict sense.

2. A more fundamental and general problem is the limited predictive value of intelligence tests at this age level. Longitudinal studies have generally shown that intelligence tests before the age of 5 only have low correlations with achievement in primary and secondary school /see e.g. the classical work of Nancy Bayley/. The probable explanation of this fact is that the performances which we expect from young children in daily life as well as

in test situations are rather different from those which in our culture are required from children after six. Object manipulation, spatial orientation and imitation play the main part in traditional intelligence tests for young children. These factors are less important after the age of 5, when the use of symbols becomes most important. /For a lucid exposition see P.R.Hofstaetter: "The changing composition of intelligence", J.gent.Psychol. 85, 1954, 159-164/. It is understandable that manipulatory behaviour does not in itself predict symbolic behaviour.

This does not mean that intelligence tests are useless at this age. Firstly, it is possible to improve to a certain extent the predictive value of the test. My husband Dr. Snijders and I endeavoured to do so by including symbolic items as early as possible in our non-verbal tests: sorting, series formation, combination of pictures.
This appears to be possible from the age of 3 on by specially adapted instructions and materials /S.O.N. test scale for deaf and hearing subjects. Groningen 1962/.

Secondly the examination should not be limited to standardized tests. These must be integrated into a more complete evaluation procedure. Observation of the child in free play and of the mutual relations with the parents is indispensable.

Thirdly great caution is required in the interpretation of test results. Predictions over a long range are undesirable; it is vacuous to make them and nobody asks for it. What really matters is to evaluate the learning ability of the child for the coming months.
Another important principle of test interpretation is that positive results form a much safer basis for prediction than negative ones. This applies especially to young and handicapped children who are examined for the first time.

Positive reactions justify positive expectations for a successful entrance in the school for the deaf. Negative results however must be evaluated with great caution in the total set of data concerning the child. At least some positive indications of learning ability are necessary. Too easy acceptance of retarded children hampers the education of the group and does not benefit the retarded themselves.

II. EMOTIONAL ADAPTABILITY.

The emotional aspects of school entrance for the young deaf child are certainly not less important than the intellectual aspects and often more difficult.
Everybody knows that the normal hearing child of 3 years old often has an emotionally difficult period. This is the period of anxiety, of negativism and resistance against authority /Trotzalter/. Does the same apply to deaf children? What are the special emotional problems of the young deaf child? How is the deaf child influenced by the transition from home to school-life?

1. The situation before school entrance.

a. Anxiety.

Anxiety of the hearing child is often the result of a fundamental lack of security. Anxiety can be caused by a home that does not give enough loving care, by parents who set to high a standard and who punish too easily, but also by overprotection, which suggests a dangerous outer world. How is the situation of the young deaf child in this respect?
Many deaf children show anxiety symptoms. In most cases these are probably not caused by lack of attention from the parents. Parents are often very much concerned about the well-being of their handicapped child.

But as a consequence of his handicap the deaf child lives in an insecure world. This world without sound or with diminished sound is at times incomprehensible.
Many things happen unexpectedly and after they happened, they cannot be explained in words. Moreover, parents of deaf children often feel awkward and uneasy, just because they are unfamiliar with the handicap. It may take years for them to become familiar with it. Overprotection of the child is often connected with this feeling of insecurity of the parents themselves.

b. WITHDRAWAL

A special emotional problem of young deaf children is, understandably, the lack of communication. Some children of a seemingly more introvert type did not get enough stimulation to become active in communication. Their lack of hearing has not been compensated by visual means, they don't show interest in the outside world and often have autistic symptoms. This condition may be aggravated by emotional inhibition of the parents in front of the child. It is frequently rooted in organic-cerebral deficiency.

c. RESISTANCE.

Do deaf children show the same need for independence as hearing children? Is authority as big an educational issue to them as it is to the hearing ones?
Certainly many deaf children show a need for independence. The frequent "I won't"'s of the hearing preschool child find a parallel in stubborn tacit refusing of the deaf child. Temper tantrums are probably more frequent as well as more violent with strong-willed deaf children.
Still there is a clear difference here. The deaf child is necessarily more dependent on adults and correspondingly

negativism and resistance seem less general. The number of deaf children who behave childishly for their age and cling to their mother seems relalively large.

2. The transition.

Which are the most important aspects of this radical change in the life of the young deaf child?

a. Separation.

In any case school entrance means a separation from home for the day, and in many cases for day and night. Separation from home and mother at this age is generally considered as an emotionally traumatic, anxiety inducing experience. To the deaf child this may be more distressing because its is impossible to explain to him why and for how long he has to go. Besides - as noted before - there are many overdependent deaf children as well as children with autistic characteristics, that are for obvious reasons hindered in their transition to school.
Sad as separation may seem, one is often surprised by the fact that so many young deaf children adapt to their new life situation without great difficulty. The reason of this may lie in counterbalancing circumstances. For many of these children preschool means the end of an isolated position among adults and children who are not used to deafness and who are not able to make adaequate contact with the deaf child themselves.
Now he is meeting many other equally handicapped children and is going to be helped in the acquisition of these mysterious means of communication, speech and language.

b. The task.

As was said earlier, whereas the hearing three-years-old plays, the deaf child has to be disciplined and has to

learn. This is perhaps the largest difference with the situation of hearing siblings of the same age. The deaf child is forced to concentrate upon language, to remember and memorise systematically, to make sounds in a way he is not able to control himself, instead of communicating spontaneously by pantomime and gesture.
This may frighten the child and force the teacher into a too severe and demanding role. Emotional immaturity of difficulties may hamper progress in speech. Intellectual achievement may lag behind by lack of congeniality of teacher and child. We should not forget that for deaf children as for normal ones, an atmosphere of freedom, creativeness and understanding is indispensable for a rich and harmonious development.

3. Evaluation of emotional adaptability.

To justify the admission of a young deaf child it is essential to ascertain whether it is able to cope with the transition problems that were briefly traced here. Learning ability is one factor, maturity to be separated from home and to take part in group life is another very important aspect. This evaluation of emotional maturity is more difficult with the little mute child. Tests are unsatisfactory, verbal conversation is impossible. A large and exact case history that gives medical, prenatal, social, sociological and psychological data is necessary. Observation of the child and the child-parent relations at home and in the test situation is essential.

III. SCHOOL ENTRANCE.

To attach a neat diagnostic label to young mute children who are examined for school entrance, is in many cases impossible. Edna Simon Levine says rightly "The real diagnostic picture emerges only after treatment is instituted and

the child's responses to various educative approaches have been studied".
/The psychology of deafness, Columbia University 1960, p. 240/.
Nevertheless, all information about the child's personality and background that is available, must be taken into account. It may help the young deaf child through its first school years with a minimum of difficulties and it may create a healthy base for further education.

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Psych - 8

HOW CAN THE HEARING HANDICAPPED CHILD BE PREPARED FOR THE ADULT LIFE IN THE HEARING WORLD?

/The paper/

From the children psychology we know, that the first seven years of life is the foundation of the character. The attitude the child will achieve to the surroundings and to what happens to it in life is all moulded in these first seven years of life.

To the hearing handicapped child this includes as well the acceptance of the handicap.

When we consider how important hearing is in achieving mental development adequate to the different phases of life, from what is said around a child, it should become clear to all, that for the hearing handicapped child the preparation for adult life and work must in different ways start as soon as the hearing loss is diagnosted. To the born deaf as well as to the child achieving the hearing loss in the early years of life it is of the greatest importance to put up constructive programs focussing this target.

A broad view of the problems in adjusting the hearing handicapped child to the hearing world.

The hearing handicapped child has some special problems in adjusting to the surroundings differently from that of the normal hearing child. The most obvious problem is of course to achieve language and speech. Though this is a very important - and indeed a very difficult and straining - factor in the upbringing of the hearing handicapped child, we must not forget the less obvious things.

The hearing handicapped child is in danger of living a very selvcentered life owing to the hearing loss. The impulses which project the normal hearing child into contact with the surroundings are noises and speech. These impulses are limited for the hearing handicapped child accordingly to the degree of the hearing loss, so therefore the child more or less do not correspond to these impulses. For the profoundly deaf child these impulses are total absently. Further more the hearing handicapped child will have difficulties in expressing it's wishes, needs, pains, feelings and all the full scale of which language consists.

The way the hearing handicapped child reacts on, is determined by the pattern of personality differing from aggression to passivity with all the shades of human nature. This fact the hearing handicapped child has in common with all children.

The Parent's Attitude.

The rcle of the child in the family life is also influing the child's behaviour as well as the way the family accepts the hearing handicap. Has the mother accepted the hearing handicap? Or is she feeling shame and guilt? Is she protecting the child from the experiences of the hearing world because of the hearing loss?

And what about the father? To my experiences the father have often greater difficulties in accepting the hearing handicapped child than the mother. The higher up he belongs in social standard the more he seems to feel the hearing handicapped child as an attack on his social success.

The Siblings Attitude.

A hearing handicapped child can be a burden to the other children in the family. If they are older than the child, they very soon get tired of all the considerations they are told to take to the hearing handicapped child, as well over the slowness of the child in following what is spoken about, the rules in games etc. They also get easier in fights with each other because of the child limit of language and speech. Sometimes the parents put weight on that problem in always shaming the older siblings when these troubles turn up.

The siblings may also feel ashamed over the child among the playmates, because the many errors and blunders the child makes is often taken for lack of intelligence.

If the hearing handicapped child is the oldest child in the family, the problem arises when younger children arrives and soon show up brighter in achieving language, speech and other things of learning causing inferiority complexes and jealousy in the hearing handicapped child.

Other Family Members´Attitude.

It´s not only with the siblings problems turn up. They will in different ways and strength radiate out to the whole family.

Grandparents for instance can be a special burden as well to the child as to the parents in showing conservative outlooks bound in family traditions and in doing so and in many other ways working against the parents about the child /Think of the film "Mandy"/.

But also aunts, uncles and others can in different ways cause more confusion and frustration to the child, than the more intimate family circle having grown together with the problems.

Playmates´ and Neighbours´Attitude,

The first touch with the world outside the sheltered family life is the playmates, the neighbours and other people living near the family. The hearing handicapped child will have a strong intuition considering these peoples´attitude. Do they show confusion, disgust, protectiveness or any overdoing of their feelings in the relationship to the child differently from that of a none handicapped child? Not at least the attitude of the playmates is of great importance to the child in the intergration to the hearing world. Do they accept the child and draw it into their way of living, in plays, in their parties and all their different activities? Or will they only occasionally allow the child to participate as a matter of mercy?

The Strangers´Attitude.

Not at least the attitude of the completely stranger will be of great importance. Negative experiences in this aspect can block the further intergration process for a long time, if the child gets afraid of contacting strangers.

Programs to minimize the problems

Parents' Guidance.

In Denmark we are so lucky to have a Guidance Clinic for the preschool deaf and hard of hearing child under the Ministry Of Social Welfare. All parents to hearing handicapped children irrespectable of income can get guidance and help there free of charge.

A staff of psychologists, kindergarten- and deafteachers - the latter as homecounsellors - is available.

From the 15 years, this clinic has been at work, it is obviously, that the hearing handicapped childrens school pattern has changed completely. The best group considering hearing and intelligence from the intern schools for the deaf can sooner or later go to the schools for the hard of hearing, whereas their best group can go to the normal school either in special classes for the hard of hearing or in their own local school supervised by a hearing pedagogue considering the hearing problems.

The group called deaf and dumb in previous days with a very limit language and hardly understandable speech is getting smaller and smaller. One intern school for the deaf has stopped and is turned into a college for the deaf, where the pupils are prepared for vocational training and further education. Another school for the deaf has taken multihandicapped childring to use it's full capacity.

The clinic is also available for the pupils of the deaf schools testing the pupils throughout the schoollife and assisting as soon as special problems show up. Also the clients from the Vocational Guidance Office for the Hard of Hearing can benefit from the clinic when needed.

Organized Program to Intergrate Hearing Handicapped Children into the Hearing World

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Group Work with Hearing Impaired Children organized by the Chicago Hearing Society

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From 1953 to 1956 The Chicago Hearing Society had a program to intergrate hearing impaired children with normal hearing children in different activities. A paid staff was the liason

between each child and the group, wether it was in community centers, boys and girls clubs, in Y.M.C.A. etc. This was however a program on schoolchildren, but similar programs could be established with preschool children as well: in kindergarten, in private childrens group activities or whereever such plan could be realised.

The plan in Chicago was, that each hearing impaired child had a person as the liason between the child and the group trained to meet this child's special needs considering hearing, speech, nature, family background and what else might matter in this intergrating process.

In the beginning this person was beside the child all the time explaining to the members of the group the communication problems and how to solve them /by lipreading distinct speech, friendliness, patience etc./. Gradually the person would loose the bondage encouraging the child to stand on its own feet in this intergrating with the group, untill it was obviously, that the target was fulfilled. The connection would then be limited to some regulary check ups to be sure, that the process went on properly. The person could of course be called for, if problems turned up.

Programs as described above with parents' guidance /including guidance to the whole family and working with the whole family in relation to the hearing handicapped child/, the placement of the child in kindergarten with normal hearing children, homecounsellors and trained persons to work with programs of intergrating the child into the hearing world is to my experiences of the greatest importance in minimizing the problems mentioned before.

Case-Stories from the Vocational Guidance Office for the Hard of Hearing in Copenhagen.

When suggesting such programs it is not just an abstract theory but based on the experiences of 20 years work at the Vocational Guidance Office for the Hard of Hearing in Copenhagen.

I therefore will give such an amount of case-stories as the limit of speech will allow me showing positive and negative intergration of hard of hearing youth.

Conclusion

The intergrating process of the hearing handicapped child in the hearing world has so many psychological problems. Deafteachers, counsellors, socialworkers and others try to solve the problems with their intuition, experience and some basic psychological knowledge in the learning process. But we all know, that the results are for most of the children: immaturity and failures in the intergrating process.

I am therefore convinced about, that programs as suggested supervised by psychologists throughout childhood and youth for all categories of hearing handicapped children would give positive results in this intergration process and a happier, richer and more normal life for them all.